Paragraph [0001]:

[0001] The invention relates to a seal assembly ~~comprising~~ having a laminated structure ~~according to the independent claim~~.

Paragraph [0002]:

[0002] Modern large industrial gas turbines have a shielded combustor such as known from US-B1-6,450,762. Due to the ever greater need for efficiency and combustor stability, the arrangement requires primary to secondary air system seals to be fitted. Driven by the work on known combustor systems, the seals are ~~become~~ exposed to ever-higher temperatures, extending to a temperature up to 1500° C on the hot gas side. It is this thermal exposure that drives the need to define a seal assembly that can live with these temperatures while remaining resilient and responsive to system movement. Highly stressed metals are subject to severe stress relaxation at high temperatures, rendering them useless as resilient sealing elements under such conditions. Even the so called nickel based super alloys such as Inconel 718 and other materials show little ability to withstand exposure to high temperatures beyond 700°C in a stressed condition without suffering severe stress relaxation and/or creep.

Paragraph [0005]:

[0005] According to the ~~independent claim~~ present invention, a seal assembly was found, the seal assembly comprising a layered structure consisting of

Paragraph [0010]:

[0010] The layered structure can be arranged within a connector plate. The connector plate is

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constructed with a composite structure which removes radiation and conduction from the central connector plate to a spring side support, in a way that the seal assembly remains within the temperature range of the cold gas flow and therefore advantageously flexible and actively sprung in its location during operation of the combustor. The layer of thermal insulating material is woven into strips which ~~maybe~~ may be aligned with or at a defined angle to the primary axis to ensure flexibility.

Paragraph [0024]:

[0024] As seen in Fig. 4 composite laminated connector plate 8 consists of three different layers 9, 10, 11. A first layer 9 of a base material or inner connector band, which can be made from a standard seal material, such as Inconel 718, is responsible for the structural integrity of the seal assembly 5. Any other standard seal material may be used as well. The second layer 10 of the thermal insulating material, such as Nextel or any other suitable material, on top of the layer 9 of base material is made from a woven material. A third layer 11 on top of the layer 910 of a thermal insulating material can be made of a base material such as Inconel 718 as well or it can be made of an oxide resistant material from any suitable oxidation resisting material. The layer 10 of thermal insulating material is woven into strips which maybe aligned with or at a defined angle to the primary axis to ensure flexibility.

Paragraph [0032]:

[0032] Fig. 5 illustrates a second embodiment of an inventive seal assembly which is consists of a laminated connector plate 8 according to the present invention. As seen in ~~the~~ Fig. 5, the connector plate 8 consists of three different layers with layer 9 of a base material, a layer 10 of a thermal insulating material, and a layer 11 of a base material or made of an oxide resistant

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material. The connector plate 8 is ~~bended~~ bent around and welded to the two sides of an E-seal 12. The E-seal 12 consists as well of Inconel 718. The E-seal 12 can be provided with or without cooling holes 13. ~~For~~ for the flow of cooling ~~holes~~air.

Paragraph [0033]:

[0033] Fig. 6 shows a third embodiment of an inventive seal assembly 5. It consists of two layers: ~~and~~ an inner and ~~on~~ an outer layer of E-seals 12 between which a layer 10 of thermal insulating material is positioned.

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